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The tonal scale in harmony: modern chords



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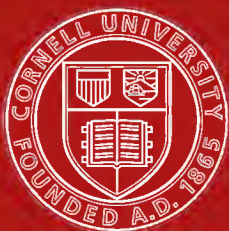
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MODERN CHORDS EXPLAINED

By ARTHUR C. PETER



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MODERN CHORDS EXPLAINED

THE TONAL SCALE IN HARMONY

MODERN CHORDS EXPLAINED

*WITH MUSICAL EXAMPLES FROM THE WORKS
OF C. DEBUSSY, RICHARD STRAUSS
AND GRANVILLE BANTOCK*

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MODERN CHORDS EXPLAINED.

THE TONAL SCALE IN HARMONY.

INTRODUCTORY.

IF composers had awaited on theory to justify their methods the greatest works would never have existed. Theory has always lagged behind, timidly far to the rear of practice; only in fact by disregarding the former have the boldest creative spirits achieved epoch-making work. It was common knowledge in his time that Purcell was a blundering experimenter, Bach did not write correct fugue, Beethoven perpetrated ugly progressions, Wagner was a charlatan, Richard Strauss was and remains to many a danger-signal, and Claude Debussy a nightmare. The question is not whether these men's music was or is the greatest work of their period but whether theory has the right to condemn

achievements which æsthetics and the trend of musical art generally have accepted as admirable. We think that theory has no such right, but that it ought to wait humbly and gladly upon practice and stamp by systematic approval the use of means which have been used to noble purpose and performance. Theory has waited upon practice, but at too great a distance off and only acquiesced when the moral support of the theorist had become quite superfluous as far as the particular composer-innovator was concerned. To make theory not only keep pace with practice but always to leave an outlet available upon paths still untrodden is our aim. Instead of clogging the wheels of advancement, as they have done so far, theories in this treatise supply an incentive to further and more daring innovations.

That an advanced system of harmony theory is required will be readily admitted, for even the most up-to-date theorists have not frankly faced the difficulties of the latest schools of composition. All along what had been done admirably in practice was often catalogued under the head of exceptions to some rule. Yet it can be shown that those very exceptional passages were the finest and most characteristic in the works

concerned. Here the æsthetic requirements were in advance of the theoretic system, and the former only won the day through superior truth and beauty. With the experience gained, therefore, by a retrospect of the history of the relations of theory and practice down to the present time, it is not a very daring thing to accept practice on its merits as practice and to make theory tally with it. Theory hitherto has been milk for musical babes; for young giants it was very inadequate nourishment. The young giant indeed speedily out-grew it, and sought his own sustenance in forbidden places. So that the plan pursued in quoting examples from even classic works and then instructing the student to avoid such methods on account of some theoretic objection was analogous to telling a grown man that mother's milk is the only food for him. A strict schooling is an advantage as long as it does not result in permanently stunting mental growth. We think that the bogie of forbidden progressions, etc., has often maimed and frustrated spontaneous expression of very good ideas and resulted in the perpetration of some ugliness which may have been "more correct." Requiring new idioms and new methods, new ideas should justify themselves and the

imagination be left unprejudiced one way or the other.

To face the problem candidly and fearlessly is to discover in it most fascinating elements, and to justify much that is still under the unspoken ban of the theorists. For much still remains over after all the usual exceptions have been catalogued. It is exactly this quantum that affords the advanced theorist the most happy results when treated with the candour he can bring to bear on it. And now our policy deals with this question specifically and in detail. Broadly stated, we go on the assumption that if the effect is musical, the means used must be right; and that 'if existing theory condemns the means then the theory is wrong and must be re-cast to classify that means, already justified in practice.

The unique feature of our system of harmony is that it is so inclusive in application that no exceptions or forbidden progressions are required. The final appeal is, of course, to the æsthetic sense, the effect being the objective, and anything to that end permissible. This gives full rein to the creative instinct, looking upon what is unusual not as exceptional, and having an open mind as to the use of either usual or unusual means.

The outstanding trait of modern music is undoubtedly its greater use of dissonance for effect. Whereas the classic masters looked upon the assonance as the basis of harmony, its essential content, the moderns recognise in dissonance their chief means for effect. As the development of the harmony instinct went on dissonance came more and more into prominence. We find Bach dwelling with infinite relish and an engaging fondness upon an ordinary dominant seventh, or a diminished seventh, and extracting from the former an exquisite expression of sweetness which before his day was associated solely with assonant chords. Later we find Wagner lingering upon and reiterating dominant ninths with an equal relish; in fact this is one of this master's mannerisms. The art of dissonance has so developed that to-day it is the predominant harmonic factor, and tends to greater and greater acuteness as well as greater insistency in use. Put broadly, it may be said that the older men used dissonance as a welcome break to the prevailing assonance, while the moderns use assonance as a relief to the prevailing dissonance in their compositions. Dissonance, having its rise in the casual clash of moving parts in the polyphonic period, came gradually to be

valued for its own sake and accordingly systematised on a harmony basis—looked at perpendicularly instead of horizontally, as in the polyphonic period. This explains much that, looked at either way alone, would be considered somewhat harsh and unpleasant.

Since Purcell's time a distinct tendency is observable to get away from the stiff diatonic relationships of chords; this tendency becomes so marked in the moderns that the older diatonic systems no longer satisfy the student in search of a working hypothesis regarding scales. In fact certain passages in the modern are incapable of analysis on any diatonic scale. These passages we here propose to elucidate and systematise. So far the recognised theorists have attempted no explanation but are unanimously silent on the subject. Not a single example of this type of harmony can we discover in any of the textbooks before the public—a singular fact, seeing that, among many others, two eminent composers, Strauss and Debussy use progressions and scales on this new system very largely. This element in the latest works which we call the tonal scale element, is not a mere passing phase but an integral and essential part of the technique of composition, and accordingly deserves

attention from the theorist who would attempt to cover the ground of contemporary practice.

In the following chapters we assume that the student has mastered the orthodox methods of harmony, and proceed to apply our new system, offering a more thorough harmonic analysis of the most modern phases of the science than has hitherto been proffered by any theorist.

I

PROFESSOR PROUT, the most erudite of English theorists in music carries his examples and explanations as far as Wagner, but does not deal with Richard Strauss, Claude Debussy or the composers of similar schools. The theory of harmony and composition brought so far by Dr. Prout seems to halt there as if recognising the presence of some new element in the more recent men's work which is not susceptible of the same kind of explanation and classification as that of Wagner and his predecessors. This new element is something outside the old conception of diatonic and chromatic scales. We propose to call it "*tonal*" because it introduces for the first time into theory the use of a consistent system of tonal scales, scales consisting of successive full tones.

TONAL SCALES :



It will be readily seen that there can be only two tonal scales. Further, that any note of either of these is as important as any other.

SOME TONAL CHORDS :



The above are a few examples of tonal chords. Each chord must have notes drawn alone from the particular tonal scale to which it belongs.

If all notes in a scale are of equal importance, there can be no dominant nor tonic as in the older systems. The abolition of dominant and tonic elements thus admits of a hitherto undreamt of freedom of movement in harmony. Thus is abolished the fettered range

of the diatonic system which recognised its tonic and dominant in a key as landmarks only to be departed from under very strict regulations. Hitherto the tonal scale and its chords have only been used in conjunction with the diatonic scale, so that the ear has been granted its customary hold on tonality. But the introduction of the tonal scale and chords has altered the whole aspect of that tonality and has given the composer an immensely wider range of modulation by means which are of a mobility impossible with the old diatonic and chromatic systems. The whole framework of the key-systems has now been loosened and rendered more elastic—kept more, as it were, in a state of solution. So that composers can take greater and more sudden departures from the key of the moment than formerly. This tendency may ultimately work out in absolute abolition of the key system now in use. Tonality being something merely in terms of what the ear can localise, and a constantly developing factor, may, in time, become a purely subtle instinct apart from diatonic key systems altogether. Meanwhile, the feeling of tonality is preserved by the constant recurrence of diatonic passages even in the most advanced music.

Scales are purely arbitrary and have changed with

the evolution of the human ear. And the so-called major and minor scales of the diatonic system have no more right to monopolise the art than the ancient ecclesiastical modes or the scale systems of ancient Ireland, China or India have. And further, the tonal scale has already justified its use by æsthetic results. So that theory has now to adjust itself to that new scale.

A scale which has no tonic and no dominant on which to establish its harmonic system must have recourse to a different basis. What is that basis?

II

WHEN composers, ostensibly writing in the diatonic system, used the chord of the French sixth, unconsciously they were writing in the tonal scale. Also when they used the chord of the augmented triad they were writing in the new scale. In many cases it was possible for them to explain away the augmented interval by calling it a passing note or a suspension. But Henry Purcell in the allegro moderato of the overture to "Dido and Æneas" uses this chord in a way that cannot be explained away as either a passing note or a suspension. The absurdity of the old explanation of the origin of the French sixth is apparent from the fact that it had to be derived from two roots. Of course, modern theorists have dis-

carded this two-root hypothesis, but we claim that their derivation is equally false. This chord like that of the augmented triad is really a tonal chord, belonging solely to the tonal scale. The older theorists were obliged to explain these chords in their own way because they were not conscious of the existence of the scale involved. But that scale, so long in creeping into unconscious use, has now become an actual reality utilised certainly along with the diatonic scale, but an integral and important factor in modern composition.

Some of these chords have been treated as diatonic by resolution, but their intervals are essentially tonal and they belong of right to the tonal scale. Modern composers use these chords with a freedom that seems to preclude the use of the term "resolution," but only from the standpoint of the old orthodox rules of resolution. Even the ordinary dominant seventh is handled in a freer way and the whole trend of practice is totally to disregard the old set methods of "resolving" all dissonances whatsoever. Chords nowadays progress so that the intervals merely readjust themselves regardless of the resulting assonance or dissonance.

In regard to the use of the tonal scale and its chords

in conjunction with the diatonic scale, the former constitute a kind of neutral ground as regards tonality or the sense of key. The feeling of tonality is suspended for the time being, all keys being equally relative to tonal scales and chords. A glance at the practice of modern composers proves this. The use of the tonal scale and its chords as well as the unusual methods of resolving diatonic chords are part and parcel of the modern tendency towards the utmost freedom of progression. So that the only rule for the progression of parts at the present stage is as follows: There must be a connecting link between successive chords of a note common to each or of one or more parts moving within the interval of a tone or semitone, the other parts being free in movement. The ear accepts this limited movement of some of the parts as a satisfactory bridge to the new chord.

To chords derived from the tonal scale, which has no dominant or tonic denominator, we have not given individual names. Perhaps a system of terminology will be evolved for tonal chords, but at present terms derived from the diatonic system would only be confusing.

EXAMPLE A—1.
Overture to "Dido and Æneas" (PURCELL).



EXAMPLE A—2.

"Dido" Overture.

Allegro moderato.



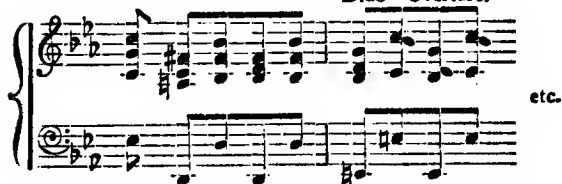
EXAMPLE A—3.

"Dido" Overture.



EXAMPLE A—4.

"Dido" Overture.



EXAMPLE A.—5.

(Boosey's Vocal Score,
Edited by FULLER MAITLAND.)

"King Arthur" (PURCELL).
No. 16, page 64.

S.
A.
CHORUS.
T.
B.

Tho' quiv-er-ing with cold,..... tho'

ACCOMPT.

quiv-er-ing with cold,..... We chat-ter, chat-ter, chat-ter, etc.

etc.

This group of examples from works by Henry Purcell we refer to later.

EXAMPLE B.

"Pelléas et Mélisande" (DEBUSSY) 138.
etc.

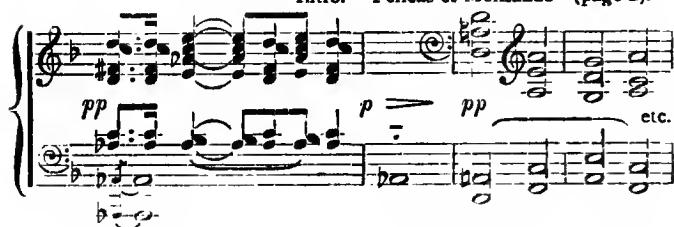


In this example the first two chords define the key as E flat minor and the two upper parts move a tone. The first chord is a secondary seventh upon F, the second a third inversion of a dominant seventh on B flat. The next chord is the characteristic chord in the bar, and is tonal. It is connected with the preceding chord by having F in common. It passes back through the same two chords to another characteristic chord, which is also tonal. The three lower parts all move a tone. The voice part at the beginning of the next bar remains stationary. But note the chord which accompanies it. The third part from the bass is changed chromatically to half a tone higher but immediately falls back to its original position in the chord which is tonal. This part is of interest, the D natural being

by way of a grace note for expressive purposes, and does not essentially alter the tonal character of the chord. The musical and dramatic phrase ends here, a new phrase starting with the C flat major chord.

EXAMPLE C.

Intro. "Pelléas et Mélisande" (page 2).



This is a fine example of a complete phrase in tonal harmony. A complete tonal scale is embodied in the phrase. The progression to the chord suggesting D minor is simply accomplished by the A flat rising half a tone. The second chord in bar three is a secondary seventh on F; the next is a $\frac{7}{4}$ chord, in reality a $\frac{7}{6}$ with the fourth as a passing note.

EXAMPLE D.

"Pelléas et Mélisande" (p. 12).

The chords in bar two are tonal, the bass ultimately rising half a tone to B natural and the D remaining common to both bars. The chord on B natural is the first inversion of a secondary seventh on G sharp, and progresses to a chord, the intervals of which are those of a diminished seventh. According to the notation the chord is a first inversion, but as it stands it ex-

presses the intervals of a diminished seventh chord, the passage not being diatonic and the notation being purely arbitrary.

The chord formed where the A sharp, C sharp and F natural occur next demands attention. The explanation of this chord is so significant of the methods of the latest composers' harmony that we defer it to a new section. Looking back at the opening of this example two chords of the secondary seventh, the first in its root position and the second in its first inversion are to be noted.

EXAMPLE E.

"Pelléas et Mélisande," (DEBUSSY), p. 18.

VOICE.

etc.

The first and second are dominant ninths on A flat; the third chord is a major triad on B natural or its enharmonic C flat. The accompaniment here contains the real bass, the melody in the voice having the effect

of being above the bass though acoustically it is below the real bass.

EXAMPLE F.

"Salome" (STRAUSS), V.S., p. 45.

The first chord is a 6-4; the next is a tonal chord. It is impossible to explain this chord on a minor thirteenth because the fifth in the vocal part is a diminished one. The resolution takes place according to rule; the C is common to both chords and certain parts rise half a tone in the progression to the first inversion

of C minor. Note the bold tonal writing for the voice. There is no mistaking that the voice part in bar two, and in the latter half of bar three and all bar four is purely tonal. Such passages can only be sung with facility on the basis of a tonal scale, and by frankly recognising and becoming familiar with that scale. Its effect in declamation approaches more nearly that of the natural inflections of the speaking voice than the diatonic scales.

EXAMPLE G.

"Salome" (STRAUSS), p. 46.



The first chord is a secondary seventh, third inversion. Some chromatic passing notes and then a tonal chord. The chord formed by the B, A, D and F sharp is also a secondary seventh; the other notes are merely passing notes. The chords in the passage resolve according to the rule.

EXAMPLE H.

"Elektra" (STRAUSS), p. 61.

The image shows a page from a musical score for 'The Swan' by Camille Saint-Saëns. The score is written for piano and violin. The piano part is in the lower staves, and the violin part is in the upper staves. The key signature is one sharp (F#), and the time signature is 3/4. The score includes various dynamic markings: *mf* (mezzo-forte), *p sfz* (piano fortissimo), *dim.* (diminuendo), *pp* (pianissimo), and *p espress.* (piano espressivo). The score ends with the word 'etc.' indicating that the music continues.

The first chord in this example is a tonal chord consisting of four notes of a tonal scale. The D sharp in the left hand is a grace note anticipatory of the chord which follows, a major triad on B. The chord in the second bar we will deal with later. Those on D and C sharp which follow are tonal and resolve according to our rule.

EXAMPLE OF A TONAL CADENCE. J.

"Omar Khayyām (GRANVILLE BANTOCK). (85).

SOPRANO. * *pp*

TENOR.

pp

The musical score is written for Soprano, Tenor, and Piano. It is in 3/4 time and B-flat major. The piano accompaniment features a continuous eighth-note pattern in both hands. The vocal parts enter with a melodic line. The score is divided into two systems, each with four staves. The first system shows the vocal entries and the piano accompaniment. The second system continues the music, leading to a cadence. Dynamics include 'pp' (pianissimo) and an asterisk (*) indicating a specific point in the music.

The musical score is written for piano in 4/4 time, featuring a key signature of three flats (B-flat, E-flat, A-flat). The score is divided into two systems. The first system consists of two staves: the upper staff is a single melodic line, and the lower staff is a single melodic line. Both staves end with a double bar line and a repeat sign. The second system consists of four staves: the first two staves are a grand staff (treble and bass clef), and the last two staves are a grand staff (treble and bass clef). The first two staves of the second system are marked *mp* and *Con espress.*. The last two staves of the second system are marked *etc.* and feature a triplet of eighth notes. The score is marked with an asterisk (*) above the first staff of the first system.

This is a sample of a tonal cadence; four bars of the passage are purely tonal.

III

THE principle of pedal notes either in the bass, middle or upper parts is a recognised one. The moderns, notably Debussy and Strauss, carry this principle to its logical extreme by sustaining not one or two notes only as a pedal, but whole chords. Startling as this may seem at first sight the principle is identical with that of classic usage. The acoustic law involved is very simple. The ear having become reconciled to the note or notes constituting the pedal at the outset, becomes as it were unconscious that the pedal is still sounding in conjunction with notes that are no longer in the same harmonic relations to it. But if the note constituting the pedal were played with many of the chords which occur in a pedal passage without the preparation necessary to a pedal they would be in violent discord. Here the rule for pre-

paration so dear to the classic mind enters into the case. On the contrary, however, the modern ear considers the preparation of discords unnecessary. And further the moderns extend the pedal principle not only to single notes but to complete chords. Thus we arrive at the point where two completely distinct chords are sounded together producing considerable discordance. In example (*D*), bar three, the first chord is the first inversion of a secondary seventh. This combination lasts for a minim's length. After this certain notes, the root, third and fifth are kept sounding like pedal notes, while there enters a foreign chord standing in no relation to this combination. The new chord is the minor triad of A sharp (the fifth being written as F, instead of E sharp), which passes, the pedal notes still sounding, and the next chord is a dominant seventh retaining the pedal notes. This is a very simple example of the use of a pedal chord in conjunction with an extraneous chord. Except that the pedal is not merely a single note, but a chord, classic men would accept its use as orthodox enough. A further stage in the application of the same principle, wherein two extraneous chords sound simultaneously, is where neither has the preparation which

constitutes a pedal. That is to say, both chords are attacked simultaneously. And we arrive at the startling fact of two distinct and distantly related chords constituting an harmony. This is the principle underlying the chord at bar two, example (*H*) from the "Elektra" of Strauss. This chord consists of two complete, non-related triads in root position, viz., the major common chords of E flat and C, with G as a note common to both. In example (*I*) the distinctness

EXAMPLE I.

"Elektra" (STRAUSS).



of the two triads forming the chord is emphasised by the notation adopted by the composer, who does not attempt to relate the triads by enharmonically juggling with his notation. Here we have a genuine two-root chord, with both roots actually sounding. Thus we have a real example of the two-root principle so wrongly applied by Banister to the French sixth in his efforts to explain a chord whose root was not ex-

pressed. Later harmonists feeling the weakness of his explanation have discarded it, but have given no better explanation. But the significance of the whole matter is that Banister actually postulated a two-root principle, only now applied in practice.

Reverting back to example (A) it will be seen that as far back as the seventeenth century a great composer by a singular instinct used chords which to the ear of that day must have sounded like chords of the minor thirteenth and minor sixth on the dominant gone wrong and, in fact, very harsh, to those days. Whereas the true explanation is that Purcell anticipated a chord of ultra-modern harmony in a scale fated ultimately to rival and possibly oust the diatonic scale in which he wrote. So that his "crude experiments" were more prophetic and significant than orthodox theorists dared to admit, and were condemned accordingly.

IV

IN conclusion we would briefly draw attention to the influence on harmony of the modern art of orchestration. The chords possible with a combination of such widely contrasted instrumental timbres as, for instance, a harp at the top and a quartet of horns beneath, are almost unlimited. On paper the chords may look impossible, but to the ear the effect may be quite beautiful. Then again the peculiar intonation of some of the orchestral instruments admits of new and far-fetched chords. The suavity of string-tone, so different from the blunt thump of a piano, has its own possibilities in strange chord combinations.

Not only is tone colour contrasted, one group of instruments with another, but remote contrasts of tonality are smoothly and charmingly brought about on different groups. Wagner, in fact, uses this device

with the most imaginatively beautiful and magical effects, effects never before dreamt of. This is a subject for future research for theorists.

But apart from instrumental timbres and their harmonic possibilities, the modern use of anticipatory notes, pedal notes, passing notes, suspensions and auxiliary notes of all kinds, is an immense field for future development. While the principle remains the same, the use is so developed and extended that the same terms can hardly any longer apply. The practice is so altered that new terms will shortly be necessary.

A modern composer is not one who consciously and deliberately uses certain far-fetched harmonies and progressions founded on an arbitrary scale, but one who intuitively and in spite of certain orthodox rules writes as he feels whether the means used be ultra-modern or not. In a word the æsthetic value of what he expresses does not depend on the elaborateness of his harmonic technique. Undoubtedly, however, the most striking feature in modern composition is certainly the growing use of the tonal scale, and of chords founded exclusively on the tonal scale.

